



UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/500,735	02/09/00	SHIPMAN	M 685-P-2-USA

Drummond & Duckworth
4590 MacArthur Boulevard Suite 500
Newport Beach CA 92660

MMC1/1018

EXAMINER

HOBDEN, D

ART UNIT

PAPER NUMBER

2875

DATE MAILED:

10/18/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/500,735

Applicant(s)

SHIPMAN, MICHAEL

Examiner

David V. Hobden

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2000 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 18) ☒ Interview Summary (PTO-413) Paper No(s). 2.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

1. The substitute declaration stating that this application is a continuation-in-part of application 09/396,141 is approved by the examiner.

Drawings

2. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect can be deferred until the application is allowed by the examiner.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "15" has been used to designate both the upper clamshell member and the entire key cap, and reference character "13" has been used to designate both the keyboard's housing and the key shafts in figures 7 and 8. Correction is required.

Specification

3. The disclosure is objected to because of the following informalities:

IN THE RELATED APPLICATIONS:

Page 1, lines 3 and 4, after "continuation" insert -- -in-part (CIP) --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Krupnik (4,806,908).

Krupnik discloses:

A lighted keyboard (Column 1, lines 1-30) having:

a keyboard housing **10** (figure 1);

a plurality of key members **12** positioned within the housing, the key members being constructed at least partially of a substantially translucent material **14** (figure 2) for communicating light rays through the key members; and

a luminescent planar sheet **52** for producing light, the luminescent planar sheet underlying the plurality of key members and being optically connected to the key members so as to permit the transmission of light to the key members;

having a circuit board **57** underlying the plurality of key members, the circuit board being operational to produce signals in response to depression of the key members (Column 4, lines 4-19).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krupnik, and in further view of Brown, LaPointe *et al.*, and DeSmet.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krupnik as applied to claims 1 and 2 above, and further in view of Brown (4,320,268).

Krupnik lacks or does not expressly disclose that the luminescent planar sheet **52** is disposed between the circuit board **57** and the key members **12**;

and the luminescent planar sheet **52** is formed with a plurality of holes, the holes underlying the key members **12** for permitting the depression of the key members to cause the key members to project through the holes to impact the circuit board.

Brown discloses in figure 2 that the luminescent planar sheet **30** is disposed between the circuit board **10,12** and the key members **22, 20**; and the luminescent planar sheet **30** is formed with a plurality of holes **31**, the holes underlying the key members **12** for permitting the depression of the key members to cause the key members to project through the holes to impact the circuit board.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the luminescent planar sheet **30** which has a plurality of holes **31** completely through the sheet for each key shaft **20** provided, as disclosed in Brown, below the key members **12** and above the circuit board **57** of Krupnik while utilizing the key shaft **20** of Brown, which transmits light through its base and shaft circumference, to modify the key member of Krupnik in order to

simplify keyboard construction and provide a keyboard that is relatively thin
(Brown, column 1, lines 17-24, and column 4, lines 4-16).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krupnik
as applied to claims 1 and 2 above, in view of Brown, and further in view of LaPointe *et al.* (5,797,482).

Krupnik lacks or does not expressly disclose an elastic diaphragm for
biasing key members upwardly, the luminescent planar sheet being disposed
between the elastic diaphragm and the circuit board.

LaPointe discloses a lighted keyboard **11** in figure 1 that has an elastic
diaphragm **17** for biasing the key members **15** upwardly, and the luminescent
planar sheet **19** is disposed between the elastic diaphragm and the circuit board
21 (Column 3, lines 57-67, Column 4, lines 1-12).

It would have been obvious to one of ordinary skill in the art at the time the
invention was made to use the elastic diaphragm as disclosed in LaPointe below
the key members **12** of Krupnik, and above the luminescent planar sheet **19** of
and circuit board **21** of LaPointe, respectively, while utilizing the key shaft **20** of
Brown, which transmits light through its base, to modify the key member of
Krupnik in order to simplify keyboard construction, provide a keyboard that is
relatively thin (Brown, column 1, lines 17-24, and column 4, lines 4-16), and
reduce power consumption (LaPointe *et al.*, Column 7, lines 44-54).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krupnik as applied to claims 1 and 2 above, in view of DeSmet (4,811,175), and further in view of Brown.

Krupnik lacks or does not expressly disclose a lighted keyboard where the luminescent planar sheet **19** underlies the circuit board **57**.

DeSmet discloses a lighted keyboard **11** (Column 1, lines 5-32) in figure 3 that has light source **23** that underlies the circuit board **13** (Column 2, lines 21-31).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the luminescent planar sheet **52**, as disclosed in Krupnik, for the light source that underlies the circuit board of DeSmet, while utilizing the key shaft **20** of Brown, which transmits light through its base, to modify the key member of Krupnik in order to simplify keyboard construction, and to provide a low profile keyboard (DeSmet; Column 1, lines 42-45).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David V. Hobden whose telephone number is 703-305-4469. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L O'Shea can be reached on 703-305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are 703-

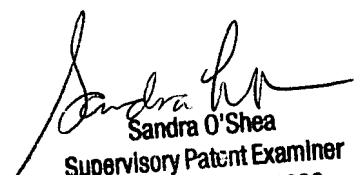
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308-7722 for regular communications and 703-308-8303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-0956.

DVH

DVH
October 16, 2000


Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800